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We Claim:

~~Patent Claims~~

1. ~~1.~~ Method for the transmission of information in various carrier frequencies with a frequency hopping method, comprising the following steps:

offering a table (25) with a plurality of N possible carrier frequency values fx in addresses 1 through N of the table (25), whereby the N possible carrier frequency values are arranged in n sub-groups;

generating (22) a sequence of random values;

reading out at least a part M of the N carrier frequency values fx from the table (25), whereby the carrier frequency values within each sub-group are read out from the corresponding addresses on the basis of the generated sequence of random values and the sub-groups are read out in a discontinuous sequence, whereby $M \leq N$ applies; and

transmitting (4, 6) information in the corresponding carrier frequencies.

2. Method according to claim 1, characterized in that the generated sequence of random values is converted into corresponding address values in the respective sub-group with which the carrier frequency values are read from the respective sub-groups of the table (25).

3. Method according to claim 1 or 2, characterized in that the following steps are implemented for the setup of a connection:

sampling (26) a carrier frequency;

deciding (27) whether a specific message was received on this carrier frequency during a specific time span;

when the decision is negative, selecting a new carrier frequency and sampling this new carrier frequency;

when the decision is positive, generating (30) the sequence of random values upon employment of the message.

4. Method according to claim 1, 2 or 3, characterized in that the following steps are implemented for the synchronization:

sampling (26) a carrier frequency;

deciding (27) whether a specific message was received on this carrier frequency

~~during a specific time span;~~

when the decision is negative, selecting a new carrier frequency and sampling this new carrier frequency;

when the decision is positive, generating (30) the sequence of random values upon employment of the message.

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5. Method according to one of the preceding claims, characterized in that a part j of k possible carrier frequency values is read out from each sub-group of the table (25), whereby the remaining k-j carrier frequency values in the respective sub-group are employed for replacing disturbed carrier frequency values of the j carrier frequency values, whereby k x n = N and j x n = M apply.

6. Method according to claim 5, characterized in that each sub-group of the table (25) is updated (31) from the k-j carrier frequency values before the read-out upon replacement of the carrier frequency values that correspond to disturbed carrier frequencies.

7. Apparatus for the transmission of information in various carrier frequencies with a frequency hopping method, comprising

a means (23) for offering a table (25) with a plurality of N possible carrier frequency value fx in addresses 1 through N of the table (25), whereby the N possible carrier frequency values are arranged in n sub-groups;

a means (22) for generating a sequence of random values;

a means (23) for reading out at least a part M of the N carrier frequency values fx from the table (25), whereby the carrier frequency values within each sub-group are read out from the corresponding addresses on the basis of the generated sequence of random values and the sub-groups are read out in a discontinuous sequence, whereby $M \leq N$ applies; and

a means (4, 6) for transmitting information in the corresponding carrier frequencies.

8. Apparatus according to claim 7, characterized by a means for converting the generated sequence of random values into address values corresponding to the respective sub-group with which the carrier frequency values are read from the respective sub-groups of the table (25).

9. Apparatus according to claim 7 or 8, characterized in that a means for ~~the setup of a connection is provided that comprises:~~

means (26) for sampling a carrier frequency;

means (27) for deciding whether a specific message was received on this carrier frequency during a specific time span, configured such that, when the decision is negative, a new carrier frequency is selected and this new carrier frequency is sampled, and, when the decision is positive, the sequence of random values is generated upon employment of the message.

10. Apparatus according to claim 7, 8 or 9, characterized in that a means for synchronization is provided that comprises:

means (26) for sampling a carrier frequency;

means (27) for deciding whether a specific message was received on this carrier frequency during a specific time span, configured such that, when the decision is negative, a new carrier frequency is selected and this new carrier frequency is sampled, and, when the decision is positive, the sequence of random values is generated upon employment of the message.

11. Apparatus according to one of the claims 7 through 10, characterized in that the means (31) for readout reads a part j of k possible carrier frequency values from each sub-group of the table, whereby the remaining k-j carrier frequency values in the respective sub-group are employed for replacing disturbed carrier frequency values of the j carrier frequency values, whereby $k \times n = N$ and $j \times n = M$ apply.

12. Apparatus according to claim 11, characterized by a means (32) for updating that updates each sub-group of the table from the k-j carrier frequency values before the readout upon replacement of the carrier frequency values that correspond to ~~disturbed carrier frequencies~~.